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Observations of transient events with Mini-MegaTORTORA wide-field monitoring system with sub-second temporal resolution

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Abstract

Here we present the summary of first years of operation and the first results of a novel 9-channel wide-field optical monitoring system with sub-second temporal resolution, Mini-MegaTORTORA (MMT-9), which is in operation now at Special Astrophysical Observatory on Russian Caucasus. The system is able to observe the sky simultaneously in either wide (900 square degrees) or narrow (100 square degrees) fields of view, either in clear light or with any combination of color (Johnson-Cousins B, V or R) and p olarimetric filters installed, with exposure times ranging from 0.1 s to hundreds of seconds. The real-time system data analysis pipeline performs automatic detection of rapid transient events, both near-Earth and extragalactic. The objects routinely detected by MMT also include faint meteors and artificial satellites.

Keywords

Instrumentation: photometers, Instrumentation: polarimeters, Techniques: high temporal resolution

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